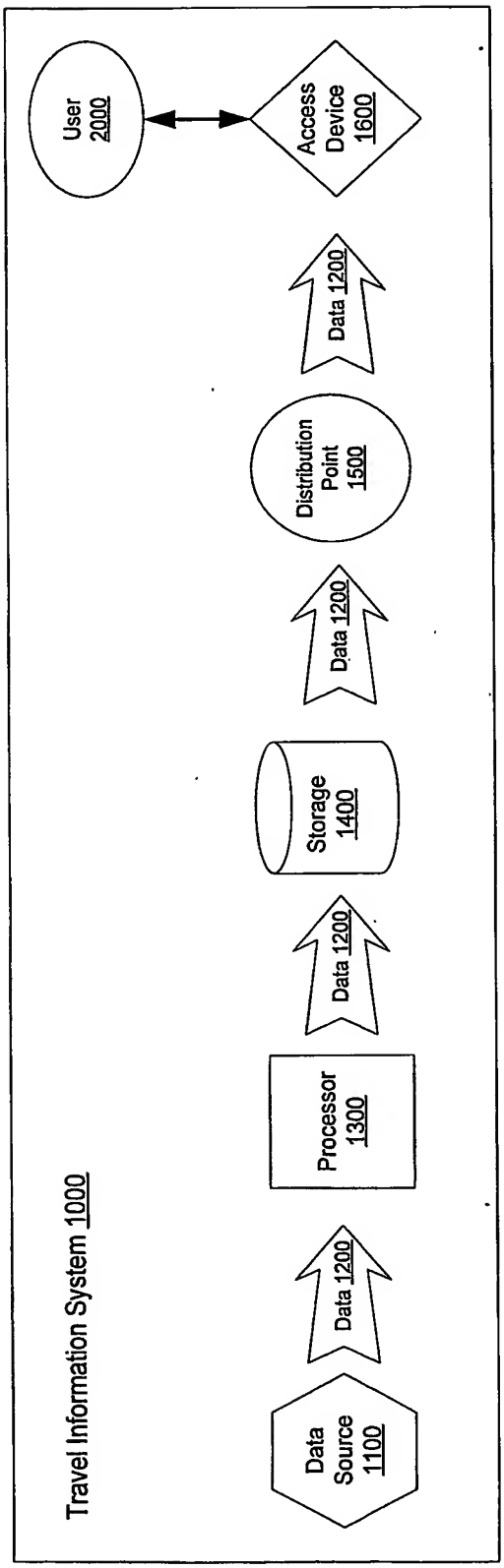
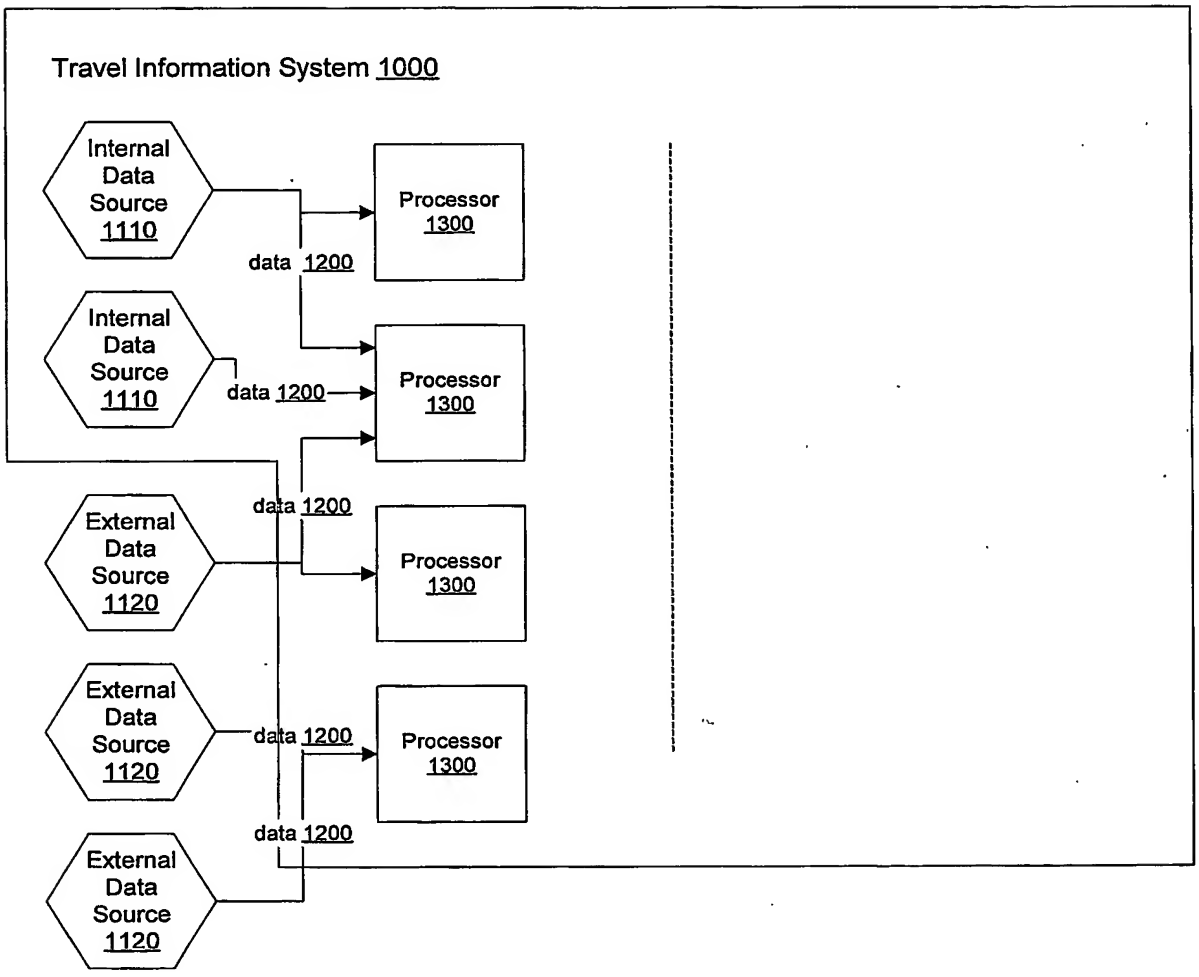
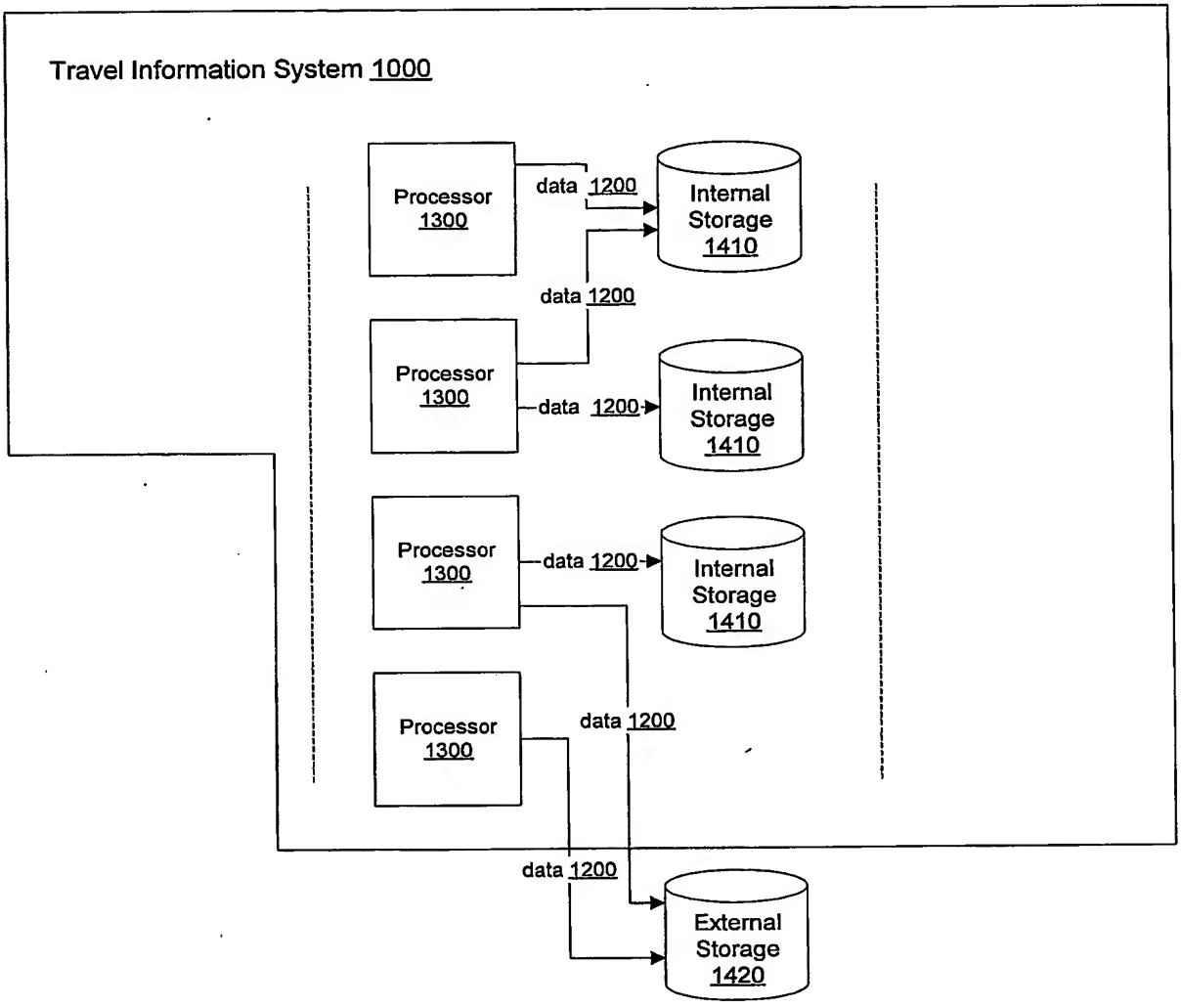
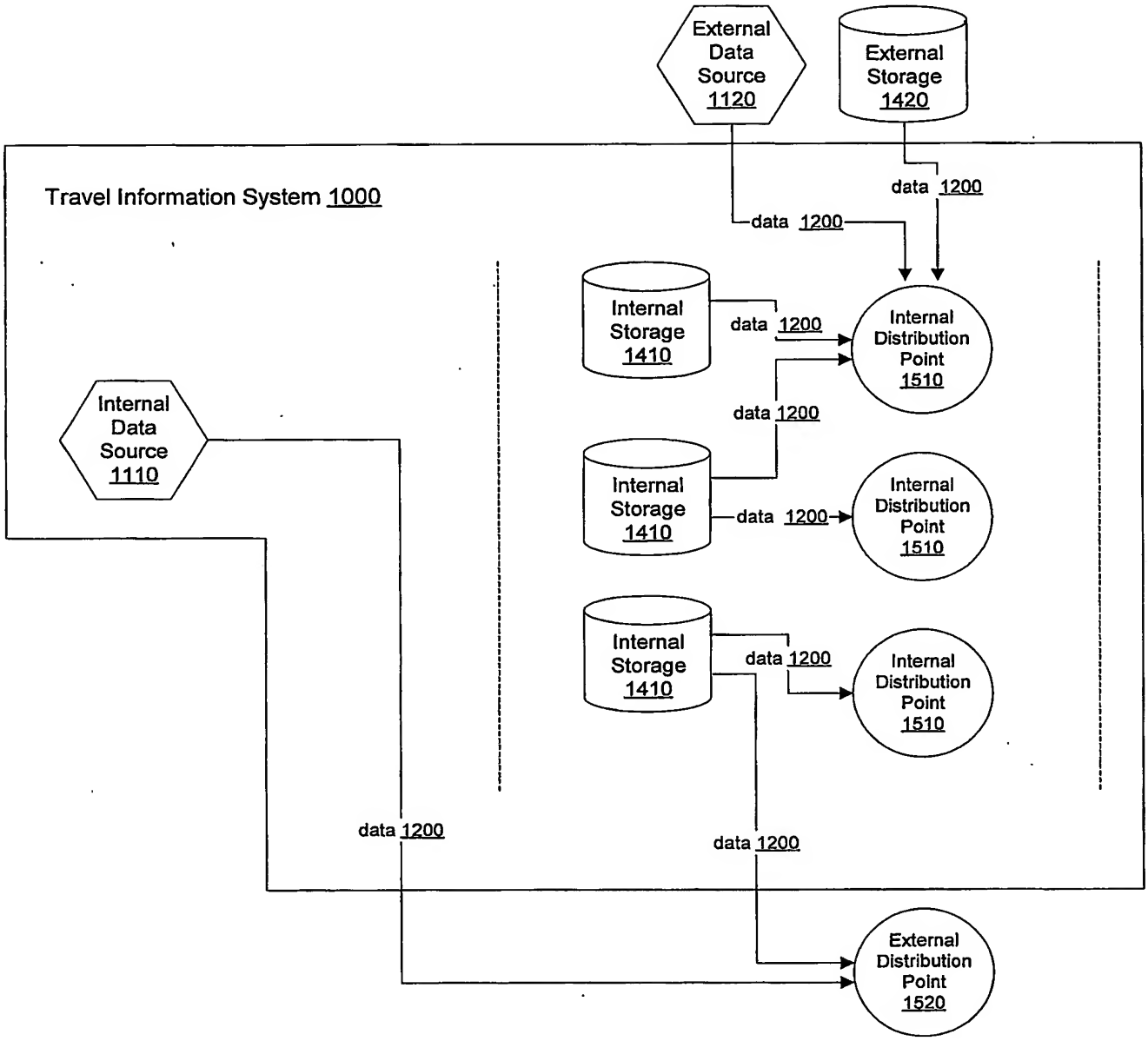
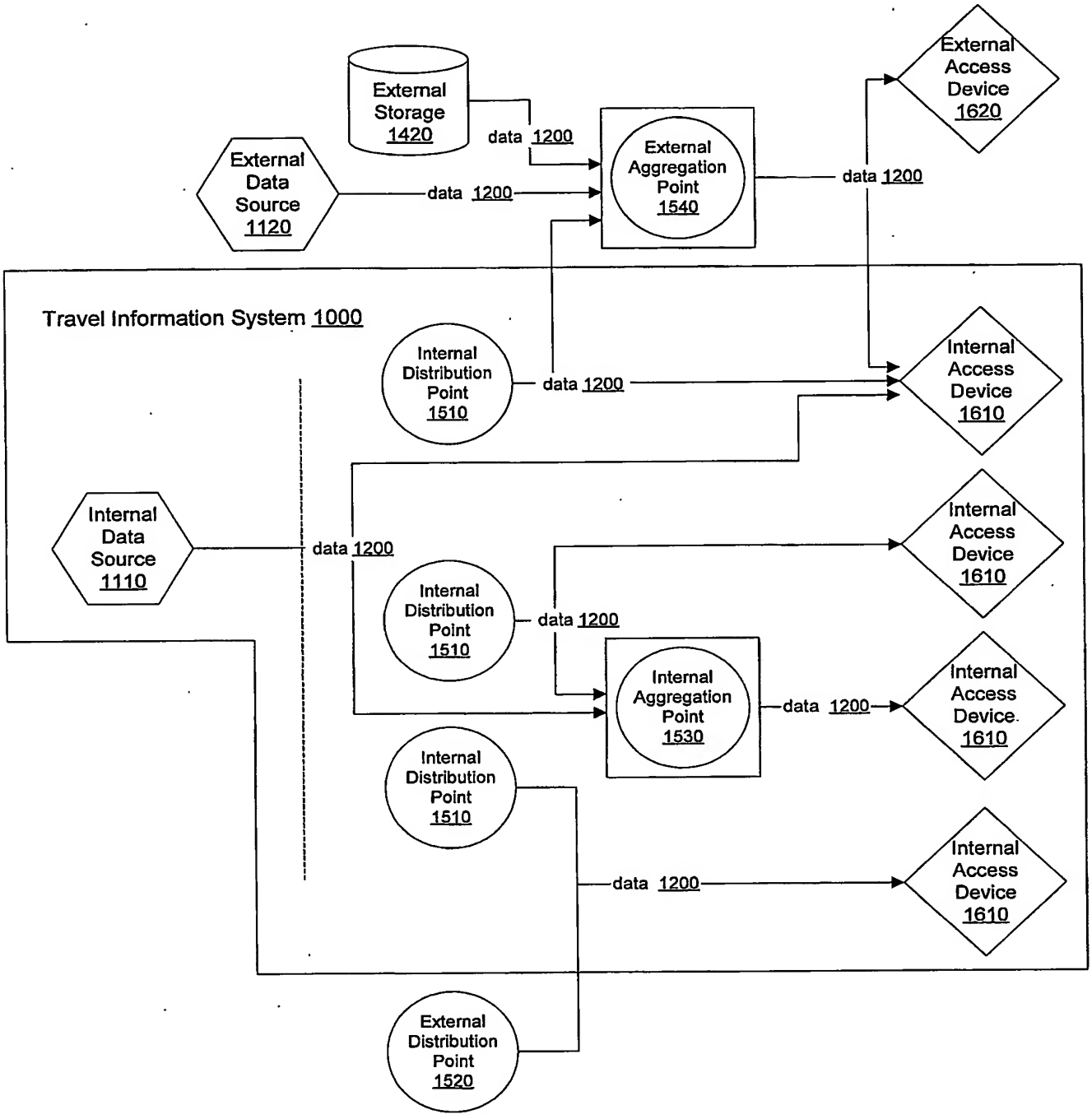
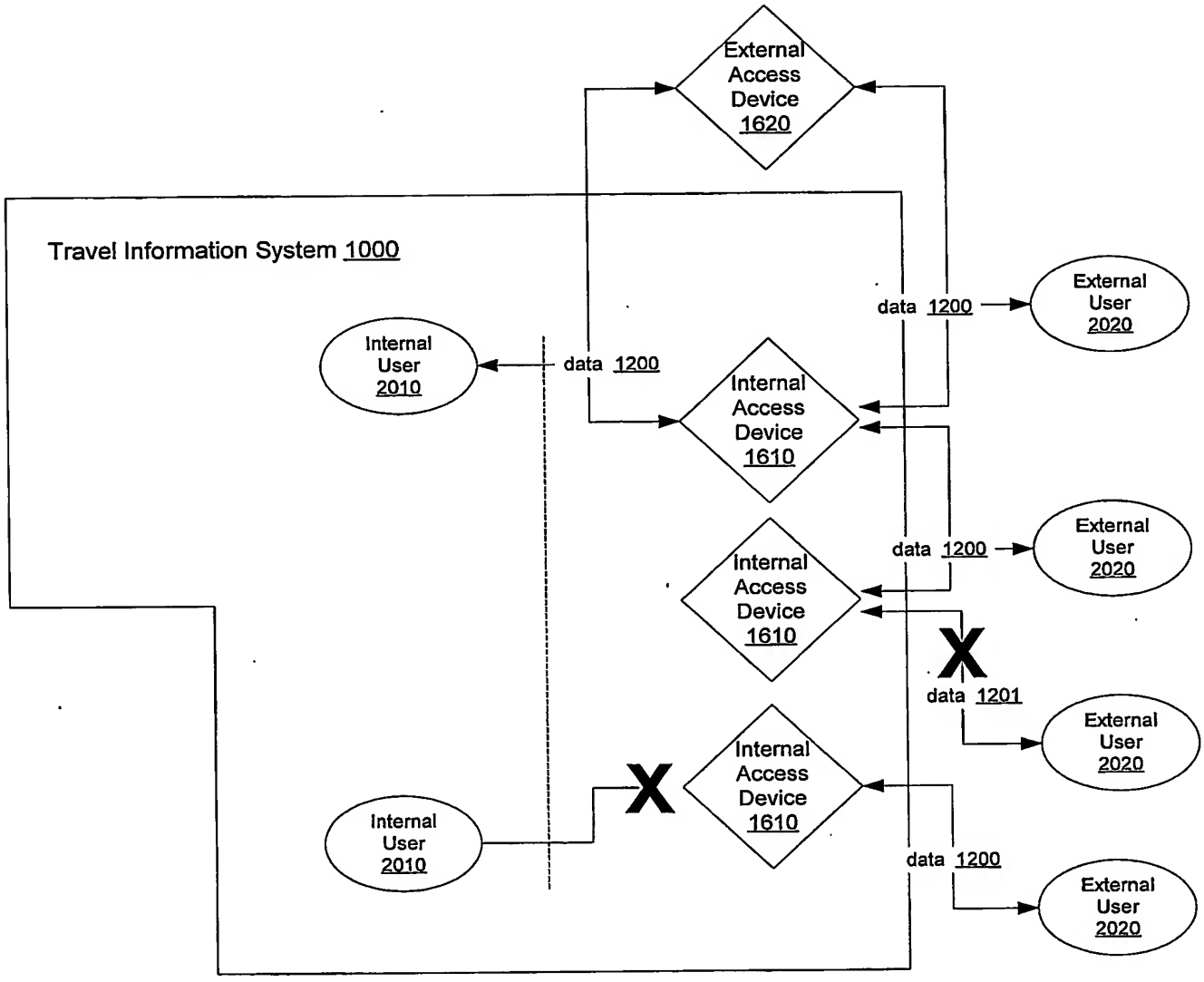

Travel Information System 1000
Data Source 1100
Data 1200
Processor 1300
Data 1200
Storage 1400
Data 1200
Distribution Point 1500
Data 1200
User 2000
Access Device 1600

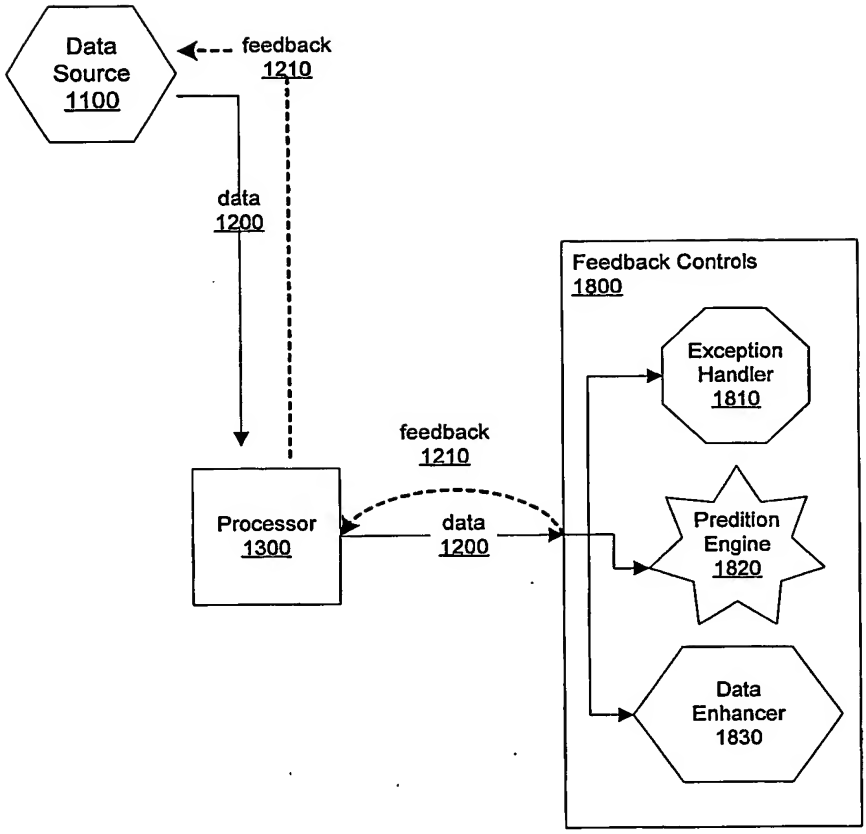

Travel Information System 1000
Internal Data Source 1110
Internal Data Source 1110
External Data Source 1120
External Data Source 1120
External Data Source 1120
Processor 1300
Processor 1300
Processor 1300
Processor 1300
data 1200
data 1200
data 1200
data 1200
data 1200


Travel Information System 1000
Processor 1300
data 1200
Internal Storage 1410
Processor 1300
data 1200
Internal Storage 1410
Processor 1300
data 1200
Internal Storage 1410
Processor 1300
data 1200
data 1200
External Storage 1420

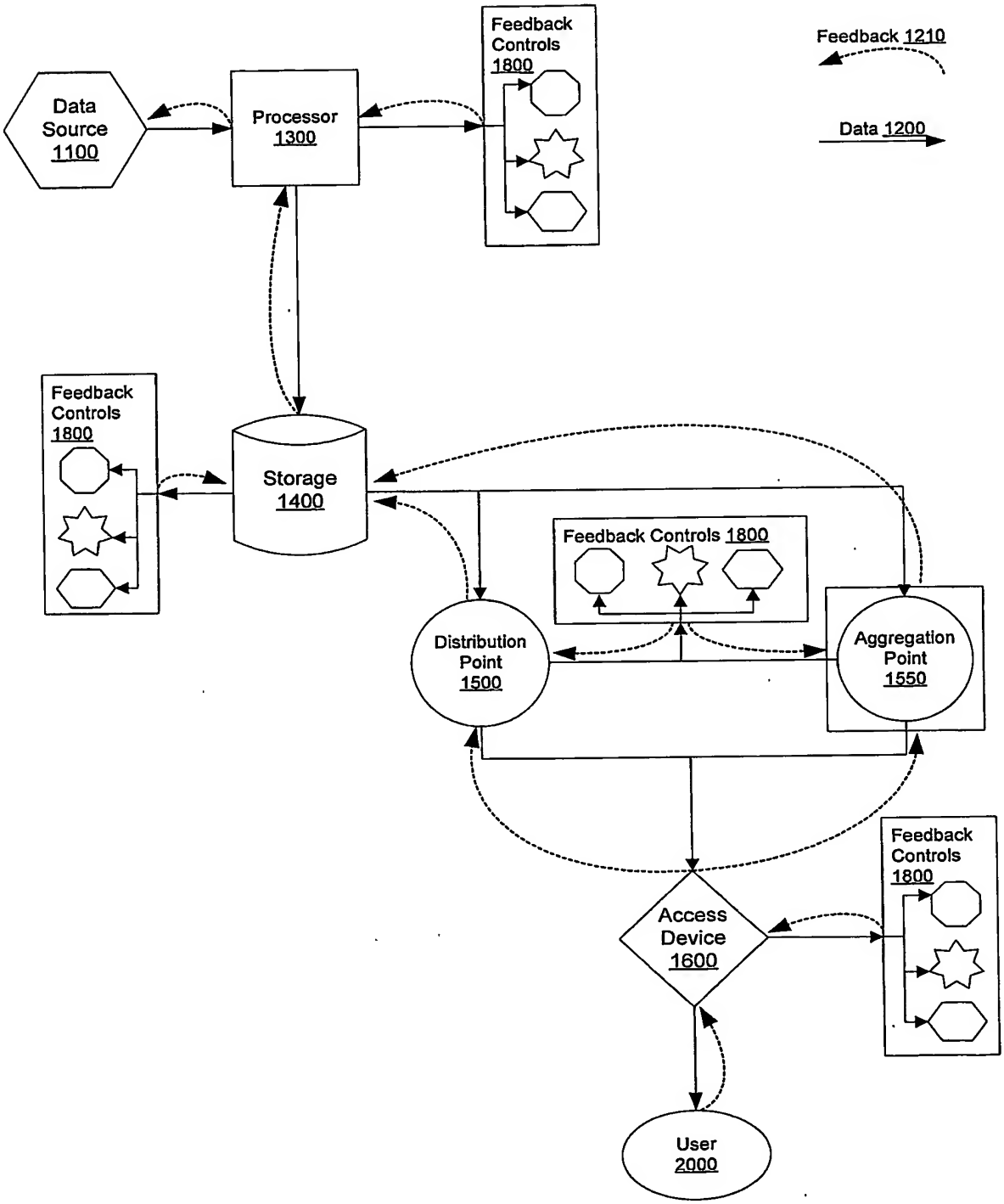

External Data Source 1120
External Storage 1420
Travel Information System 1000
data 1200
data 1200
Internal Storage 1410
data 1200
Internal Distribution Point 1510
data 1200
Internal Data Source 1110
Internal Storage 1410
data 1200
Internal Distribution Point 1510
Internal Storage 1410
data 1200
Internal Distribution Point 1510
data 1200
data 1200
External Distribution Point 1520

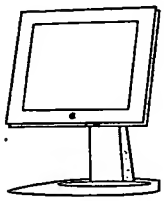

External Storage 1420
data 1200
External Data Source 1120
data 1200
External Aggregation Point 1540
data 1200
External Access Device 1620
Travel Information System 1000
Internal Distribution Point 1510
data 1200
Internal Access Device 1610
Internal Data Source 1110
data 1200
Internal Distribution Point 1510
data 1200
Internal Access Device 1610
Internal Aggregation Point 1530
data 1200
Internal Access Device 1610
Internal Distribution Point 1510
data 1200
Internal Access Device 1610
External Distribution Point 1520


External Access Device 1620
Travel Information System 1000
data 1200
External User 2020
Internal User 2010
data 1200
Internal Access Device 1610
Internal Access Device 1610
data 1200
External User 2020
X
data 1201
External User 2020
Internal Access Device 1610
X
Internal User 2010
data 1200
External User 2020

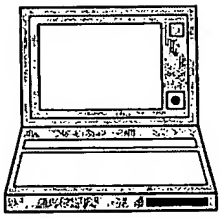

Data Source 1100
feedback 1210
data 1200
Feedback Controls 1800
Exception Handler 1810
Predition Engine 1820
Data Enhancer 1830
feedback 1210
Processor 1300
data 1200

Travel Information System 1000

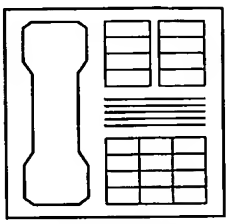




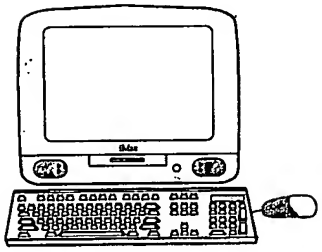
Web Access Device
9932



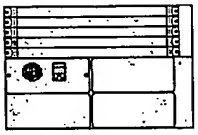
Laptop
Computer
9930



Telephone
9921



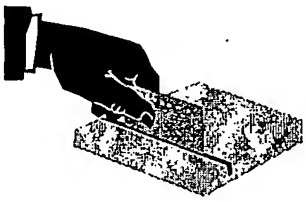
Computer
9931



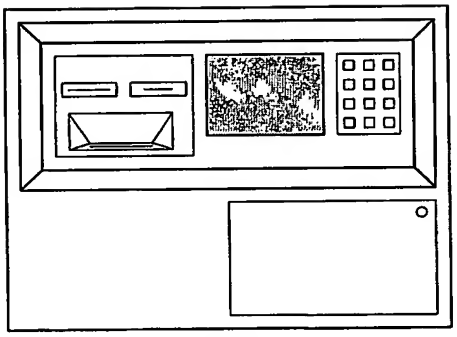
Voice Response Unit
9922

PDA
9940

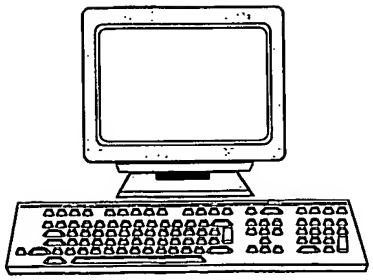
Pager
9910



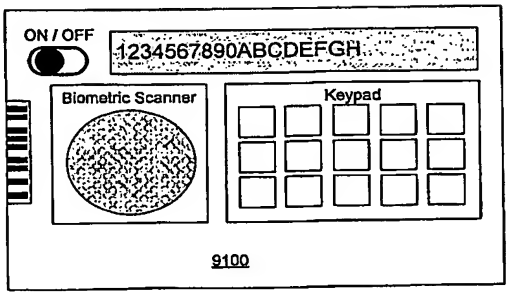
Smart Card 7320

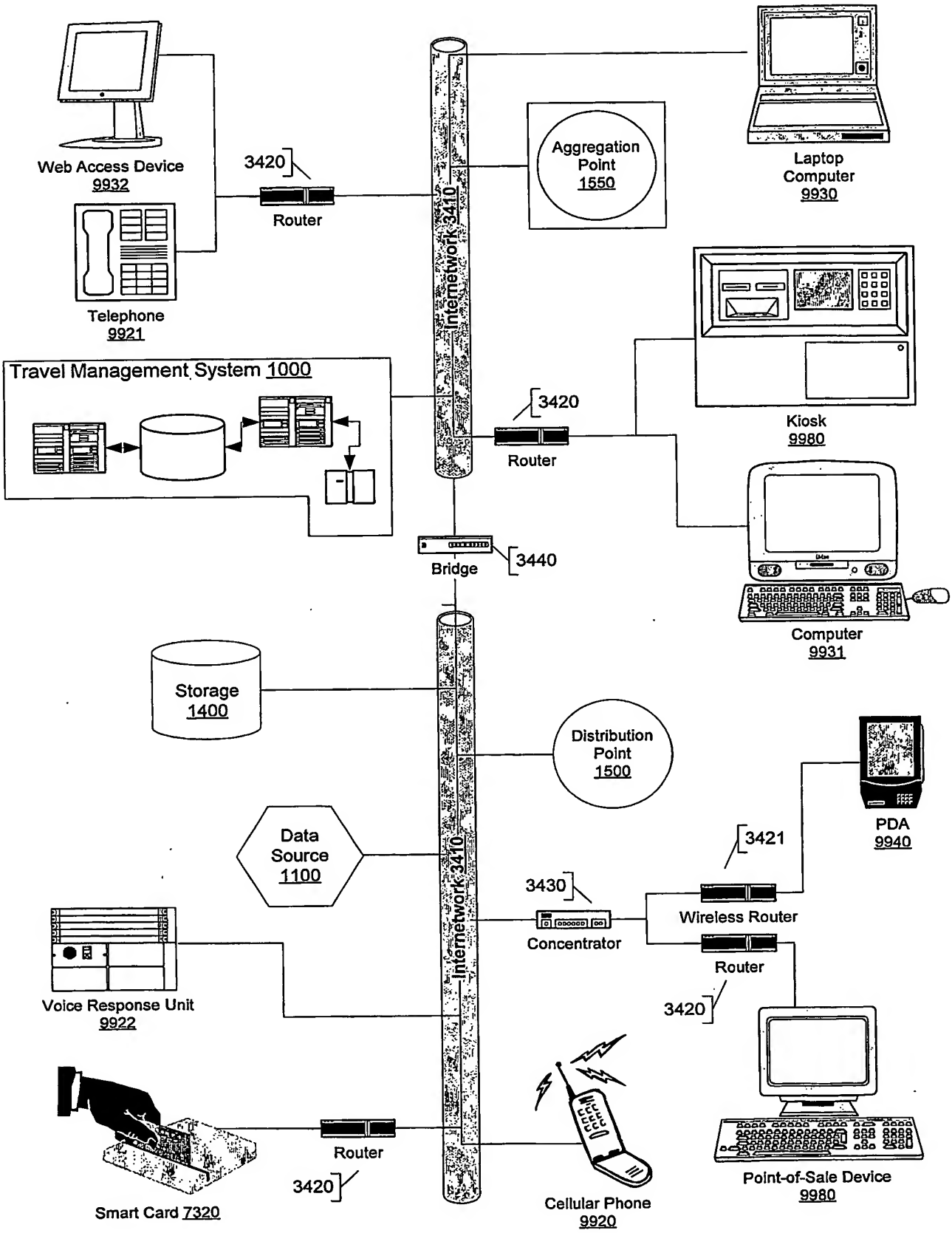


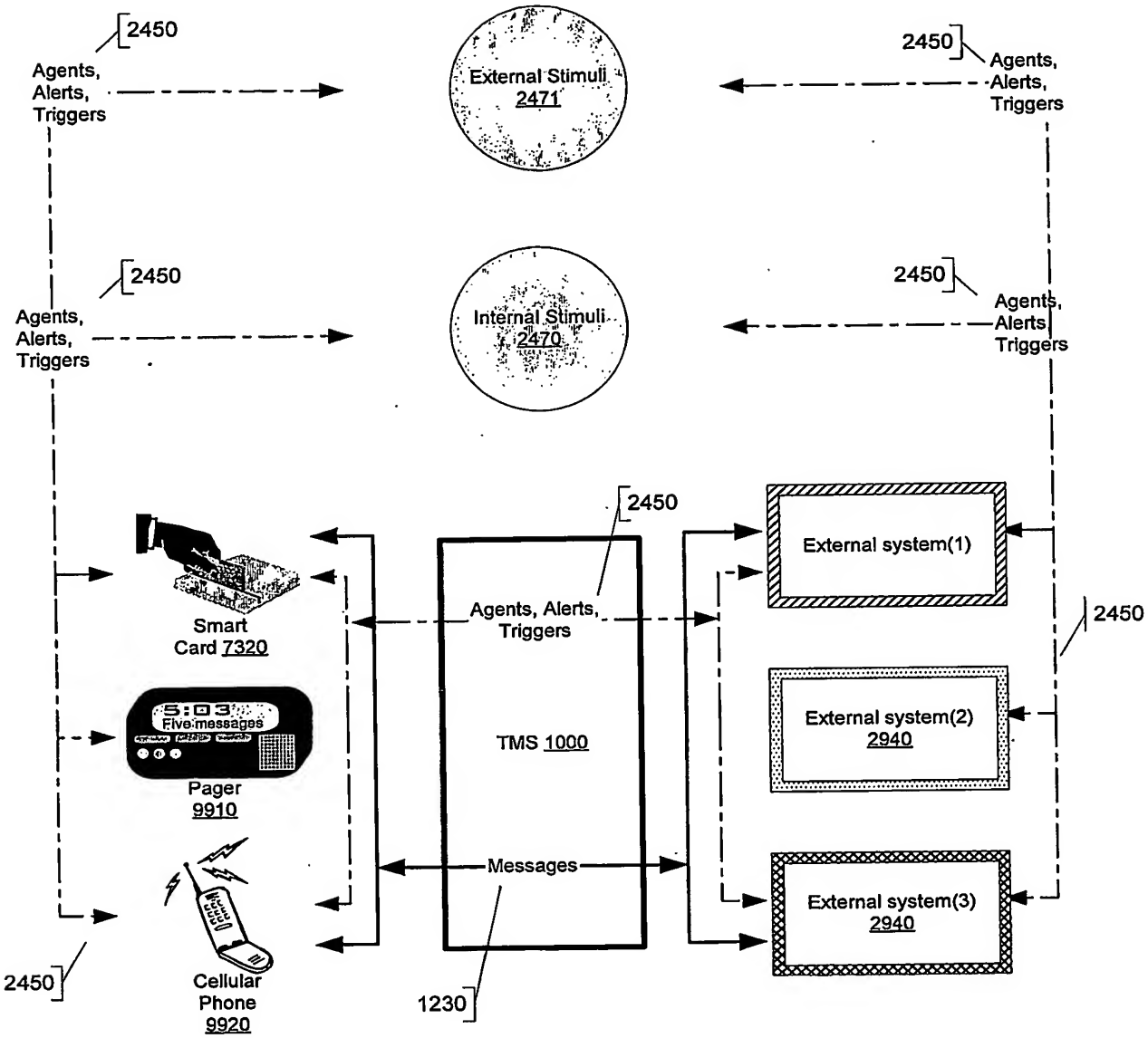
Kiosk
9980

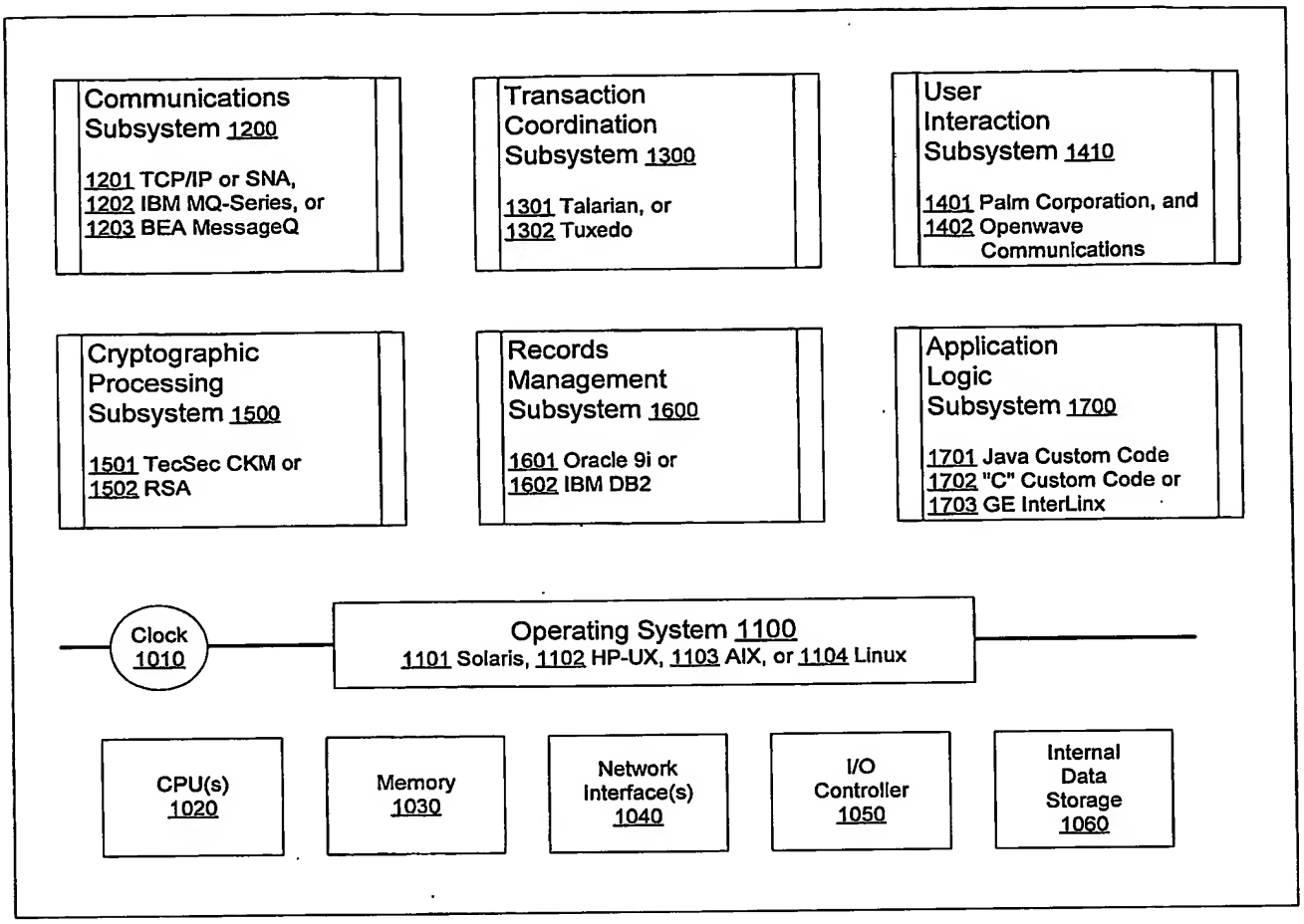


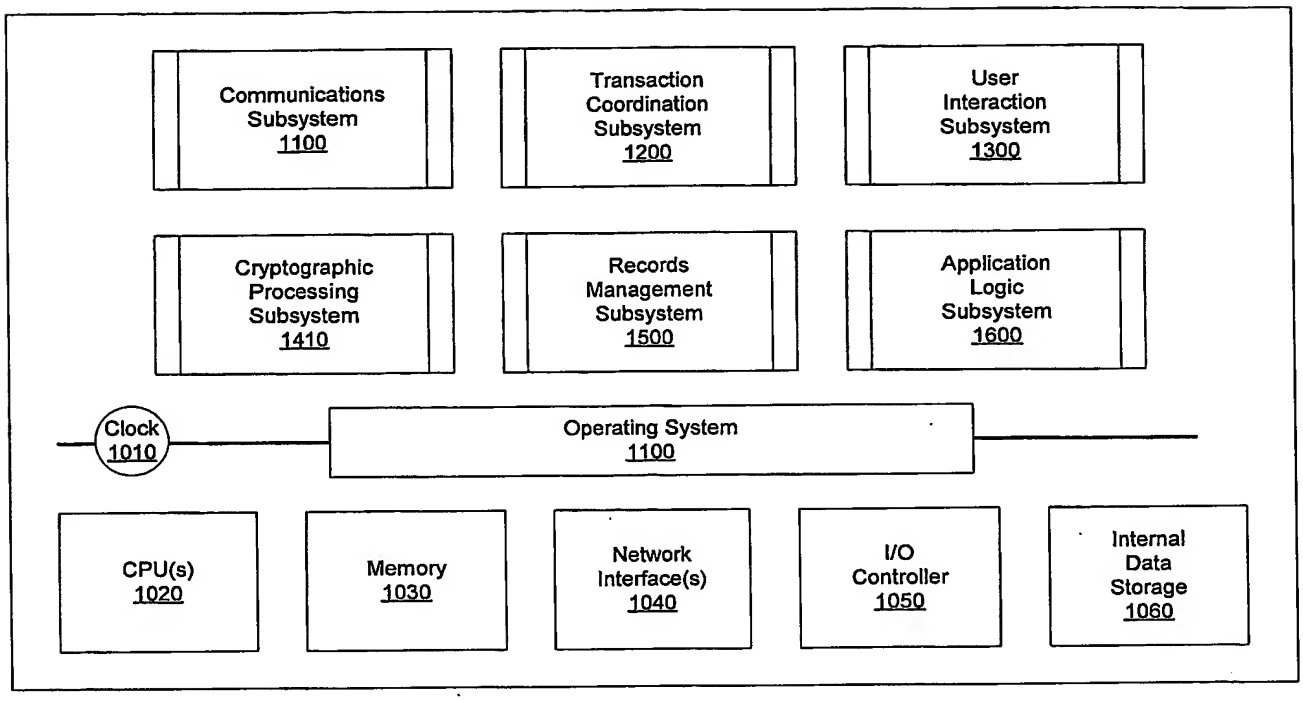
Point-of-Sale Device
9980

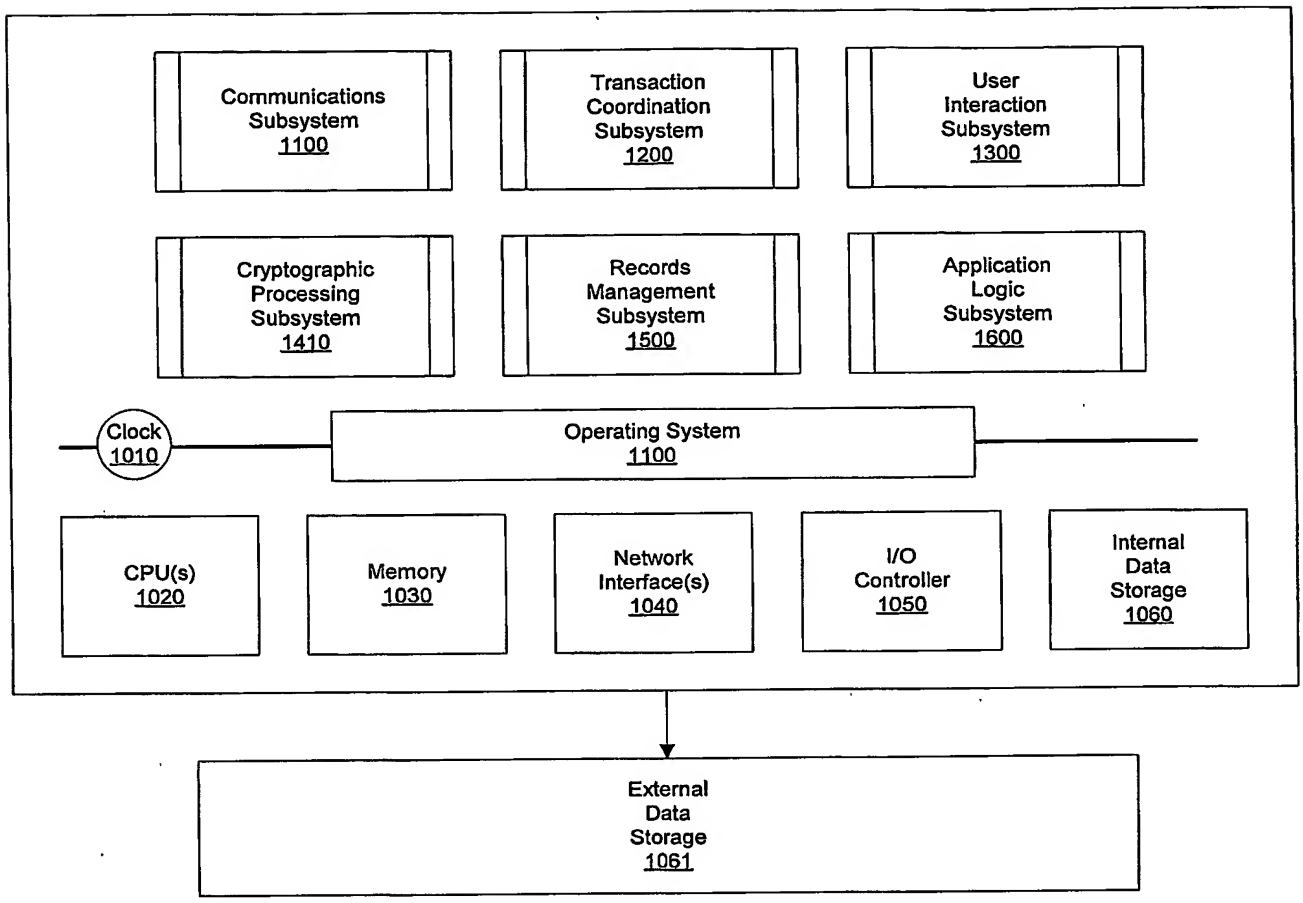


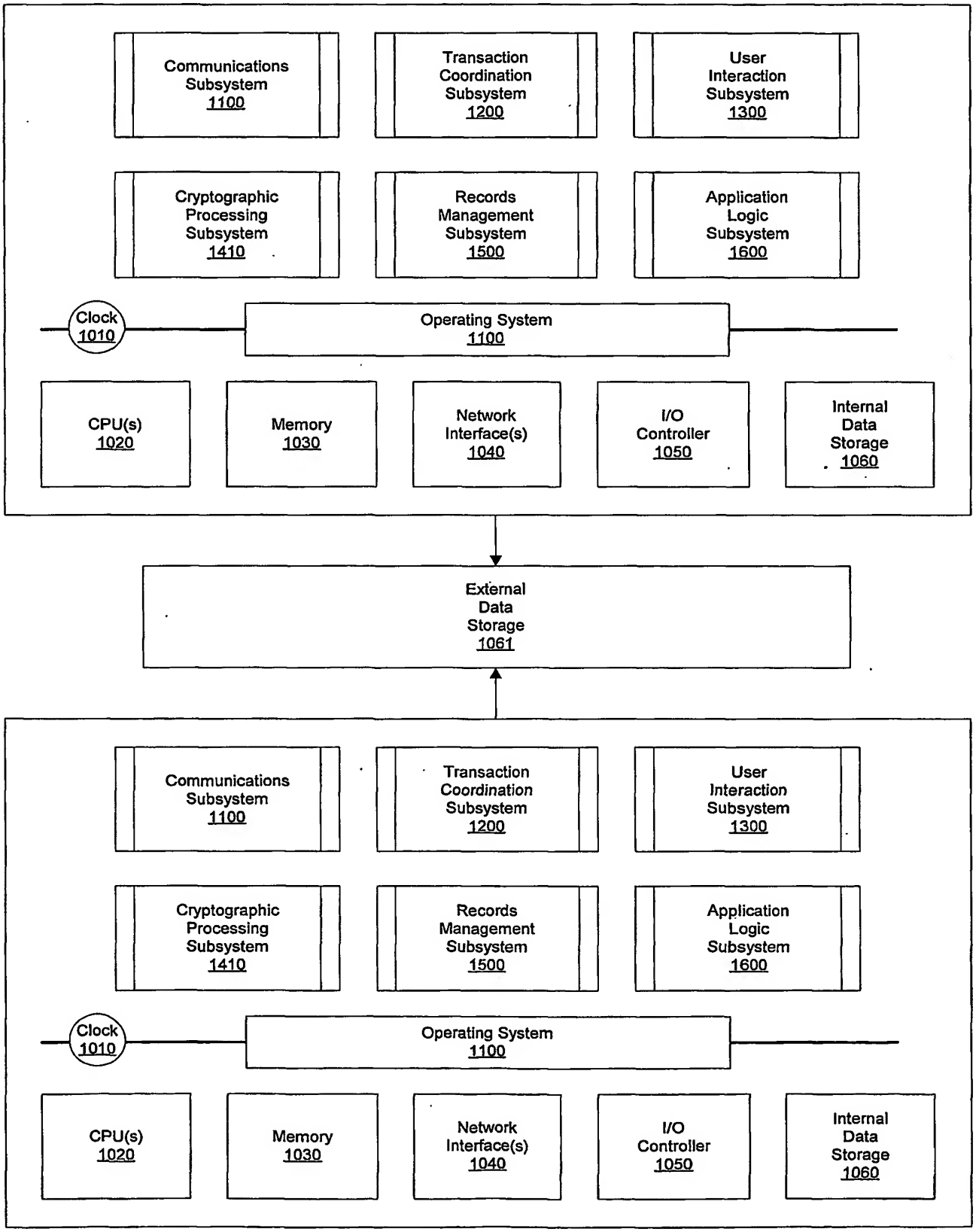

Web Access Device
9932
3420
Router
Telephone
9921
Internetwork 3410
Aggregation Point
1550
Laptop Computer
9930
Travel Management System 1000
3420
Router
Kiosk
9980
Bridge
3440
Computer
9931
Storage
1400
Distribution Point
1500
PDA
9940
Data Source
1100
3421
3430
Wireless Router
Concentrator
Router
Voice Response Unit
9922
3420
Router
3420
Smart Card 7320
Cellular Phone
9920
Point-of-Sale Device
9980

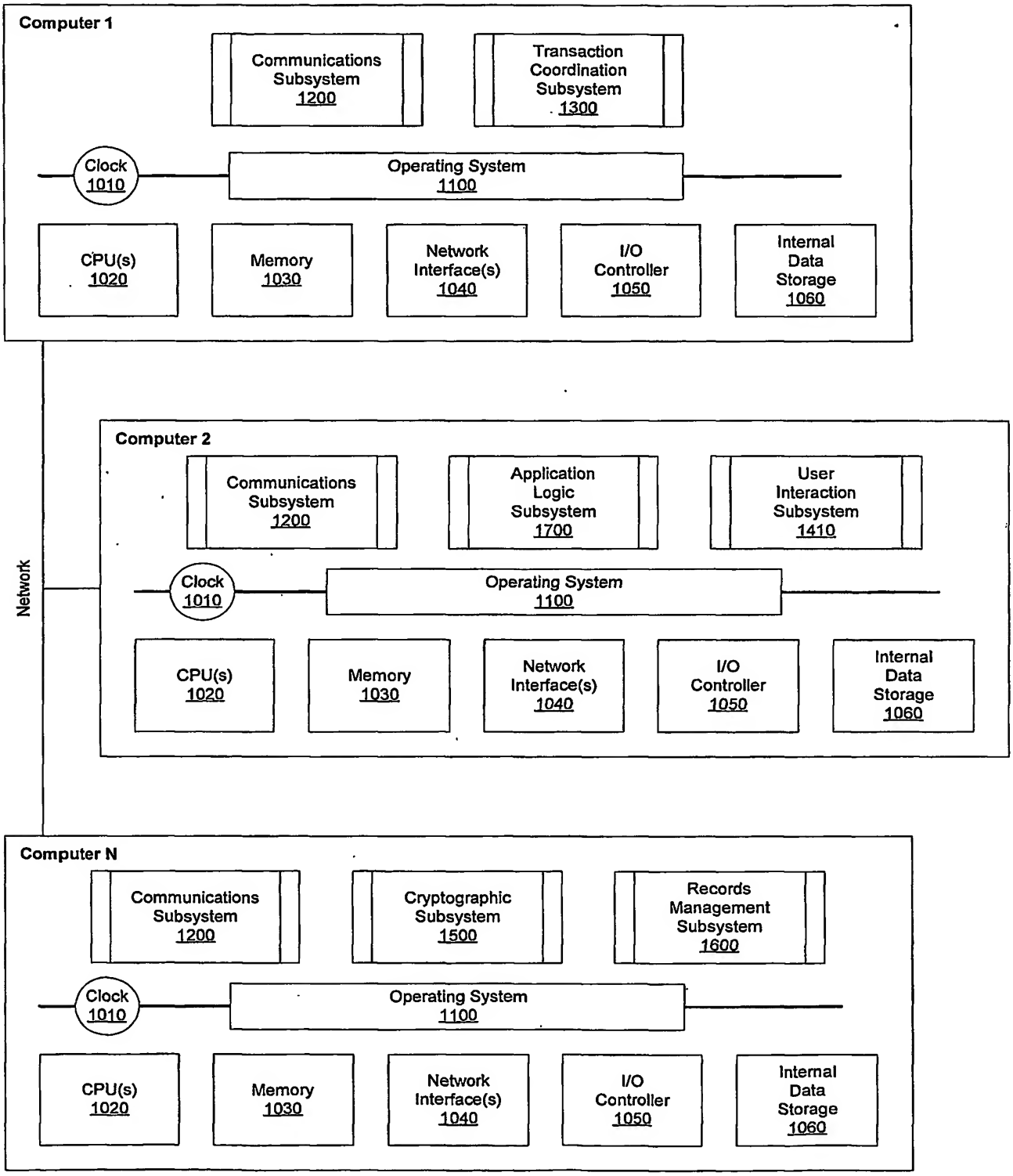

2450
Agents, Alerts, Triggers
External Stimuli 2471
2450
Agents, Alerts, Triggers
2450
Agents, Alerts, Triggers
Internal Stimuli 2470
2450
Agents, Alerts, Triggers
2450
Smart Card 7320
5:03 Five messages
Pager 9910
Cellular Phone 9920
2450
Agents, Alerts, Triggers
TMS 1000
Messages
1230
External system(1)
External system(2) 2940
External system(3) 2940
2450


Communications Subsystem 1200
1201 TCP/IP or SNA,
1202 IBM MQ-Series, or
1203 BEA MessageQ
Transaction Coordination Subsystem 1300
1301 Talarian, or
1302 Tuxedo
User Interaction Subsystem 1410
1401 Palm Corporation, and
1402 Openwave Communications
Cryptographic Processing Subsystem 1500
1501 TecSec CKM or
1502 RSA
Records Management Subsystem 1600
1601 Oracle 9i or
1602 IBM DB2
Application Logic Subsystem 1700
1701 Java Custom Code
1702 "C" Custom Code or
1703 GE InterLinx
Clock 1010
Operating System 1100
1101 Solaris, 1102 HP-UX, 1103 AIX, or 1104 Linux
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060


Communications Subsystem 1100
Transaction Coordination Subsystem 1200
User Interaction Subsystem 1300
Cryptographic Processing Subsystem 1410
Records Management Subsystem 1500
Application Logic Subsystem 1600
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060


Communications Subsystem 1100
Transaction Coordination Subsystem 1200
User Interaction Subsystem 1300
Cryptographic Processing Subsystem 1410
Records Management Subsystem 1500
Application Logic Subsystem 1600
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060
External Data Storage 1061

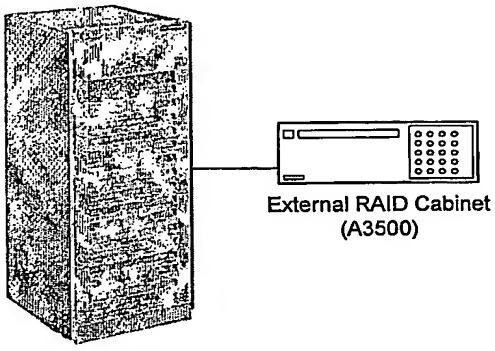

Communications Subsystem 1100
Transaction Coordination Subsystem 1200
User Interaction Subsystem 1300
Cryptographic Processing Subsystem 1410
Records Management Subsystem 1500
Application Logic Subsystem 1600
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060
External Data Storage 1061
Communications Subsystem 1100
Transaction Coordination Subsystem 1200
User Interaction Subsystem 1300
Cryptographic Processing Subsystem 1410
Records Management Subsystem 1500
Application Logic Subsystem 1600
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060


Computer 1
Communications Subsystem 1200
Transaction Coordination Subsystem 1300
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060
Network
Computer 2
Communications Subsystem 1200
Application Logic Subsystem 1700
User Interaction Subsystem 1410
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060
Computer N
Communications Subsystem 1200
Cryptographic Subsystem 1500
Records Management Subsystem 1600
Clock 1010
Operating System 1100
CPU(s) 1020
Memory 1030
Network Interface(s) 1040
I/O Controller 1050
Internal Data Storage 1060

Travel Management System Hardware Configurations

Small

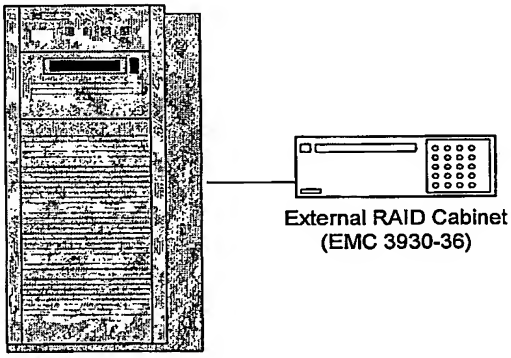
At least one Ultrasparc III CPU
At least 1GB RAM
At least one I/O board with Gigabit Ethernet Interfaces
At least one S-BUS FC-AL fibre channel I/O boards
A least one Sun StorEdge A3500FC disk array
Sun Solaris 9



SunFire

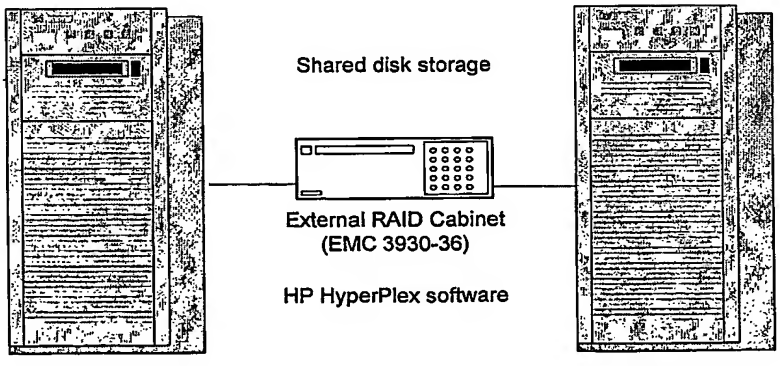
Large

At least one PA-8700+ CPU
At least 64GB RAM
At least one I/O board with Gigabit Ethernet Interfaces
At least one FC-AL fibre channel I/O boards
A least one EMC Symmetrix 3930-36 disk array
HP-UX 11i

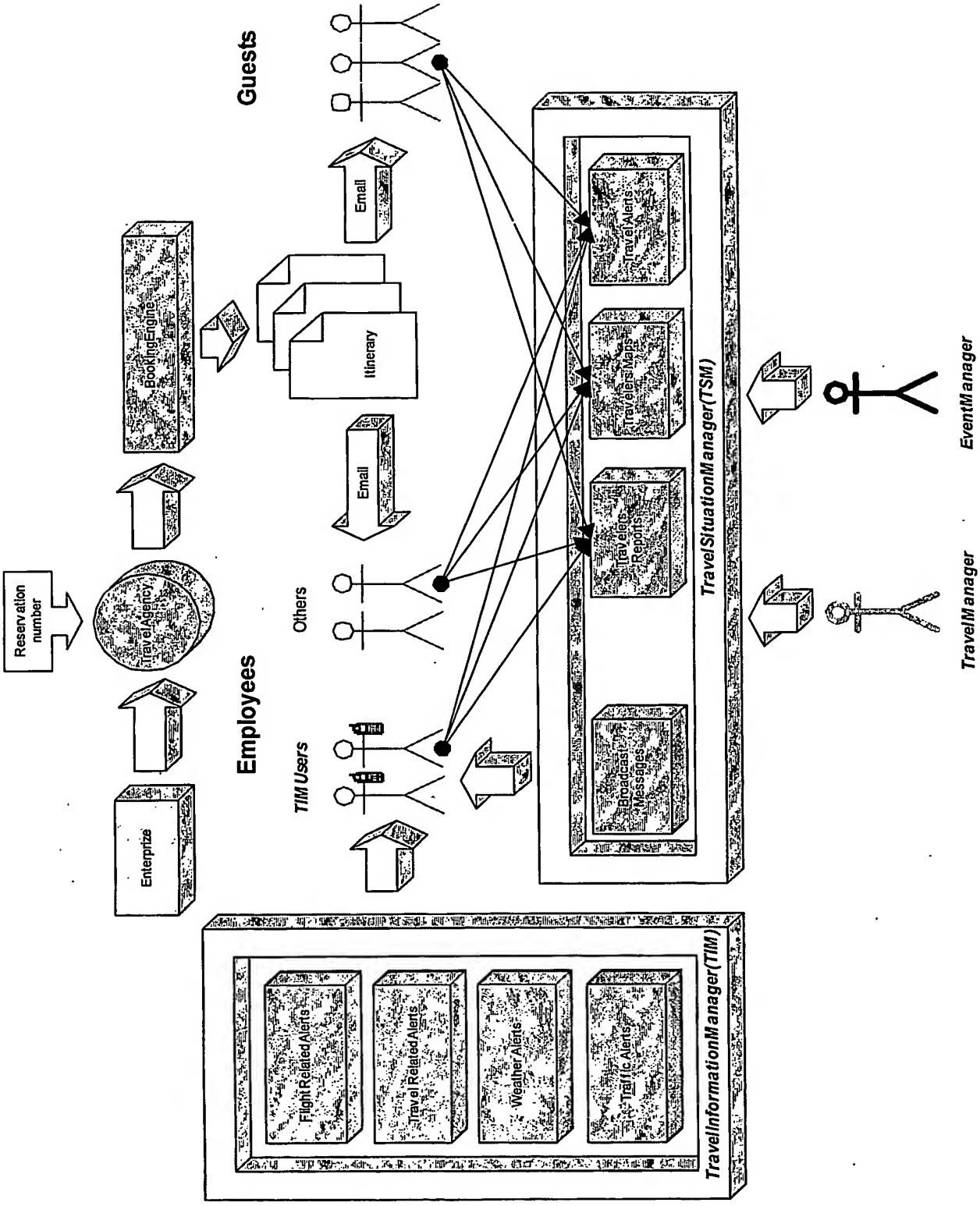


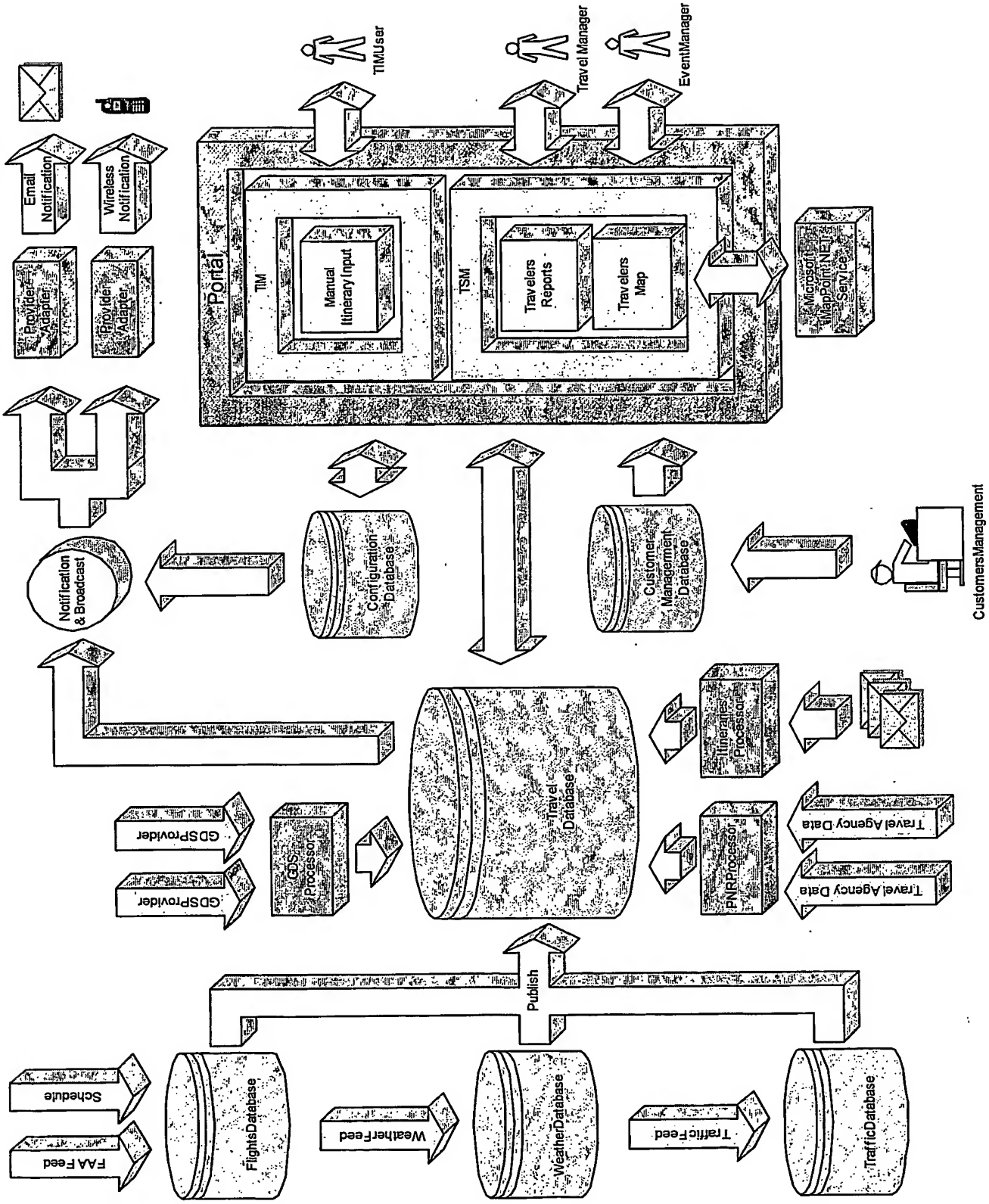
HP SuperDome

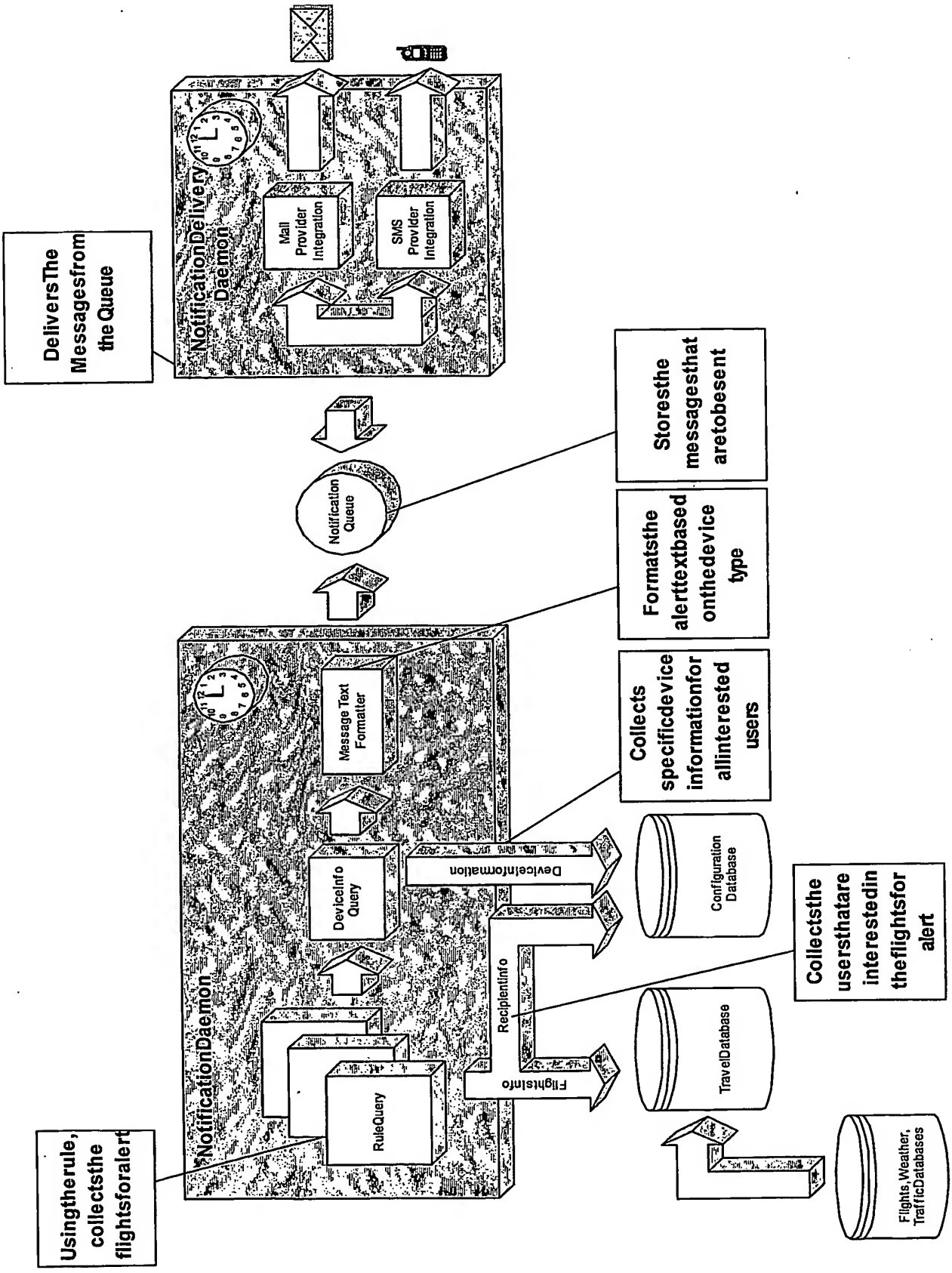
High Availability

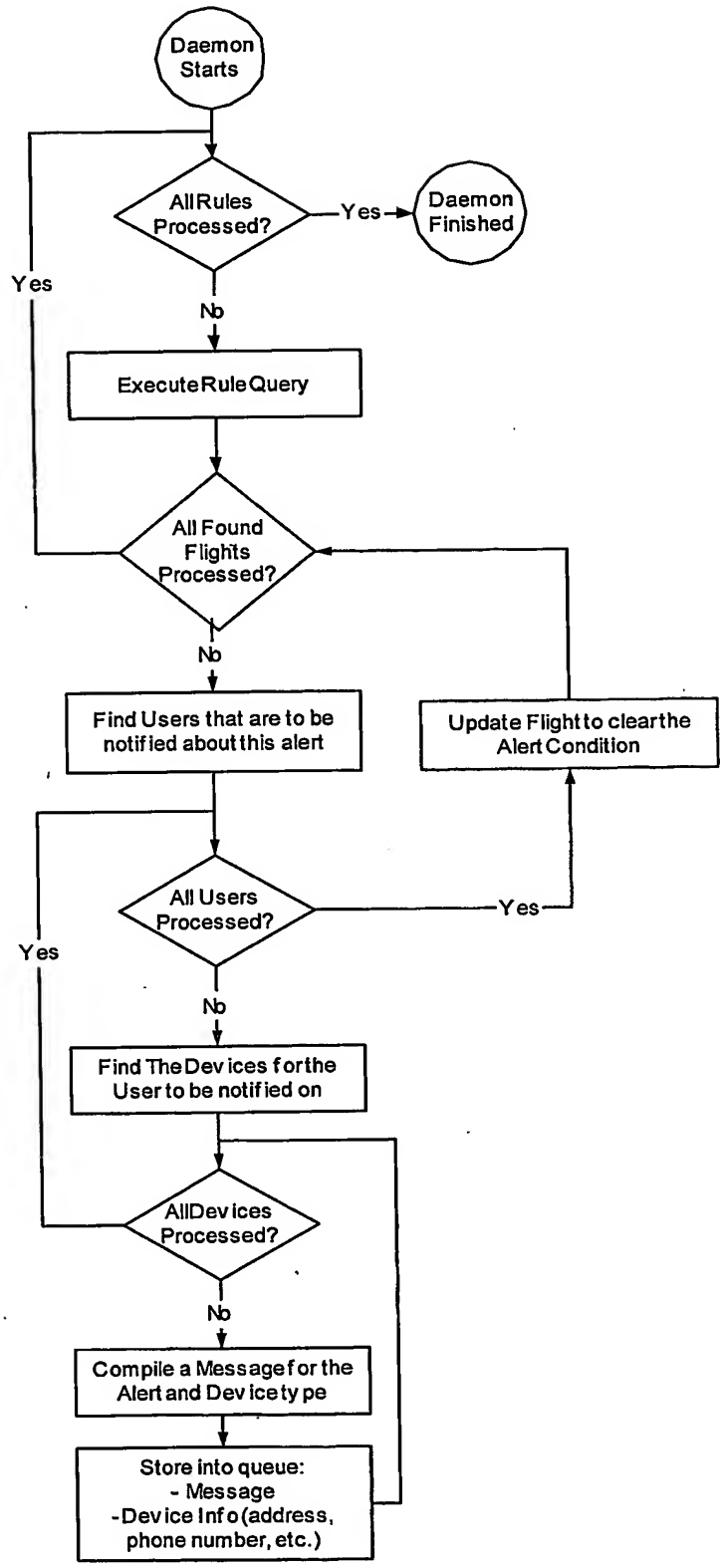


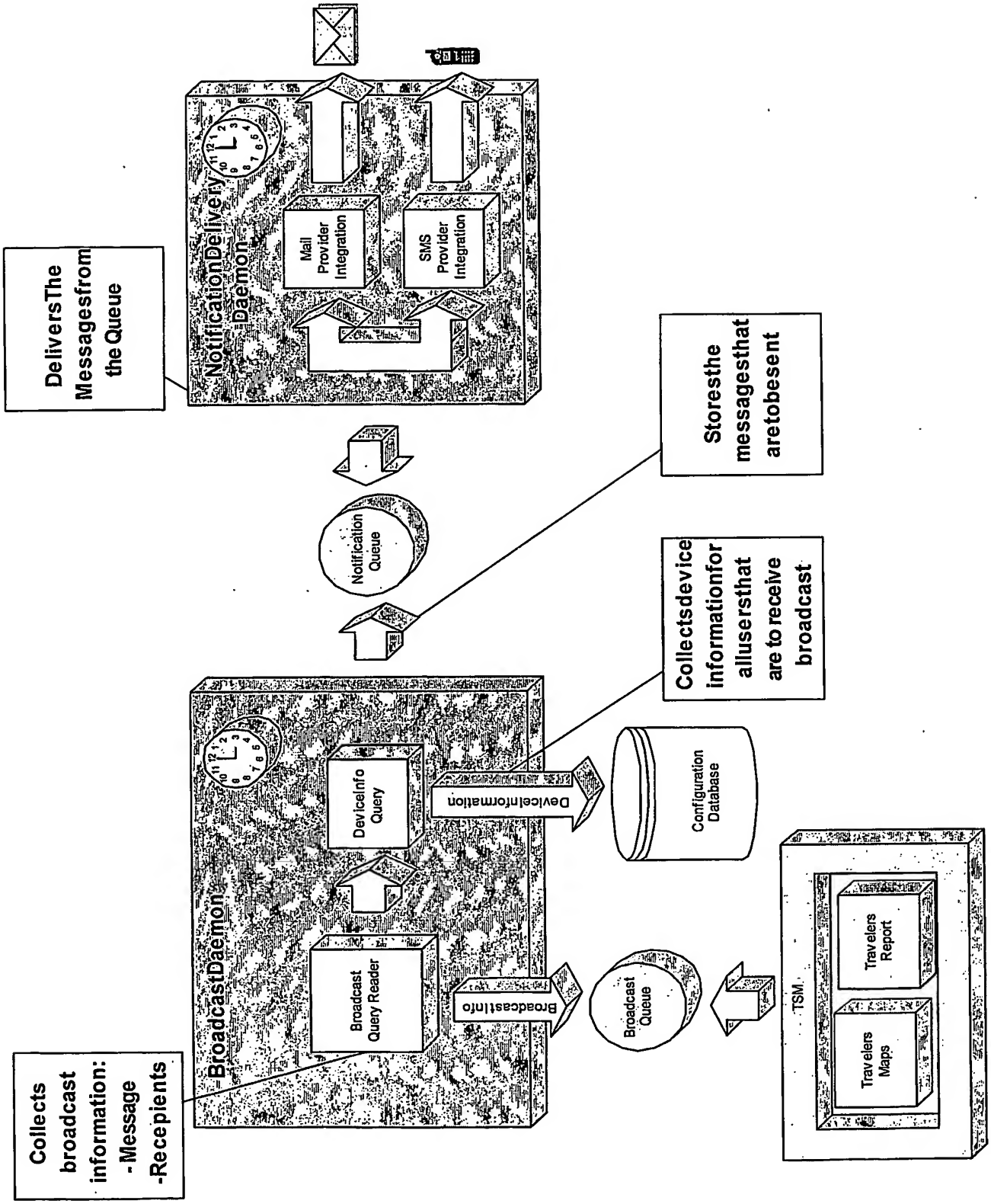
HP SuperDome HP SuperDome

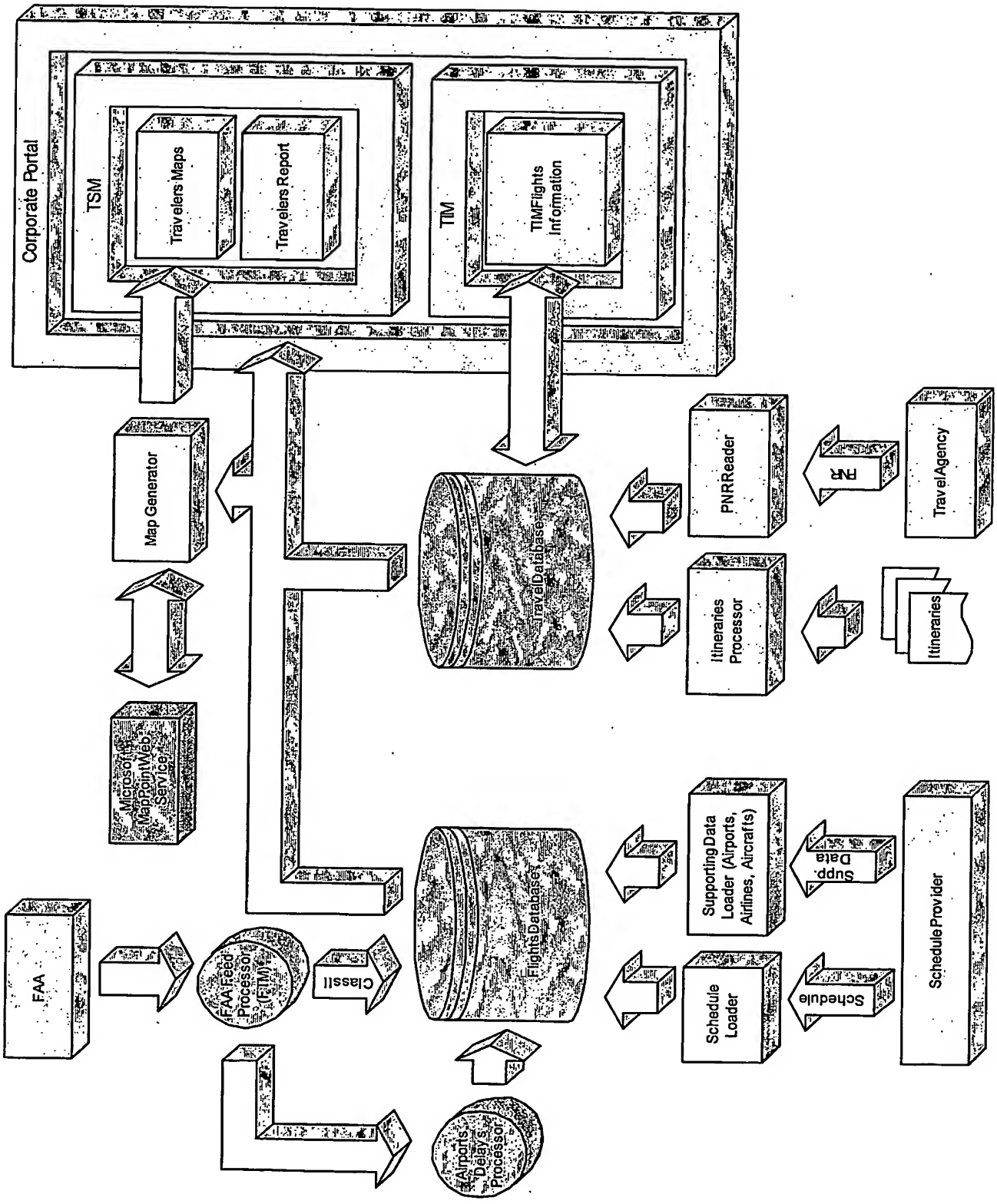

Guests
Email
Itinerary
Email
Booking Engine
Reservation number
Travel Agency
Enterprize
Employees
Others
TIM Users
Travel Alerts
Travelers Maps
Travelers Reports
Broadcast Messages
TravelSituationManager(TSM)
EventManager
TravelManager
Flight Related Alerts
Travel Related Alerts
Weather Alerts
Traffic Alerts
TravelInformationManager(TIM)

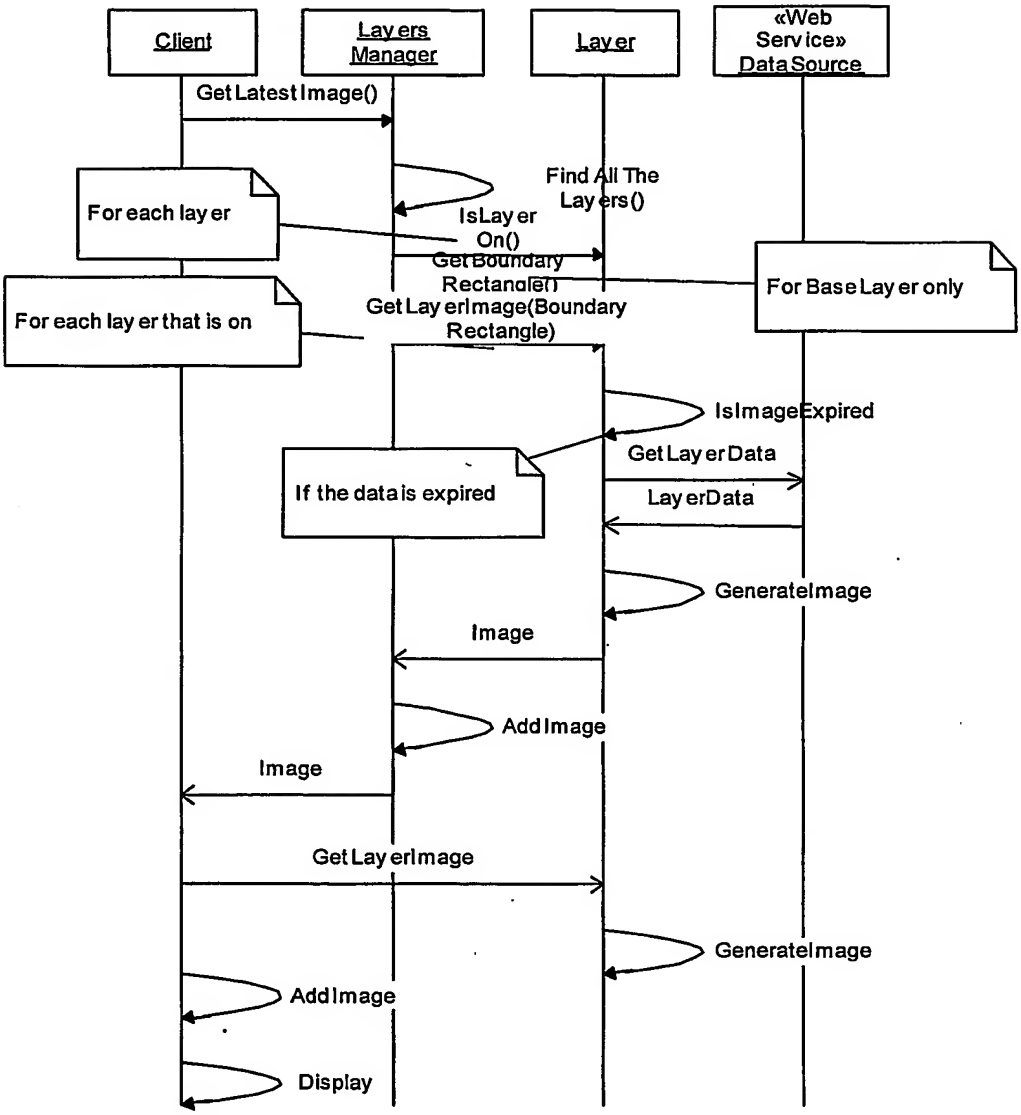

TIMUser
Travel Manager
EventManager
Email Notification
Wireless Notification
Provider Adapter
Provider Adapter
Portal
TIM
Manual Itinerary Input
TSM
Travelers Reports
Travelers Map
Microsoft MapPoint.NET Service
Notification & Broadcast
Configuration Database
Customer Management Database
CustomersManagement
Travel Database
Itineraries Processor
GDSProvider
GDSProvider
GDS Processor
PNRProcessor
Travel Agency Data
Travel Agency Data
Publish
Schedule
FAA Feed
FlightsDatabase
WeatherFeed
WeatherDatabase
TrafficFeed
TrafficDatabase

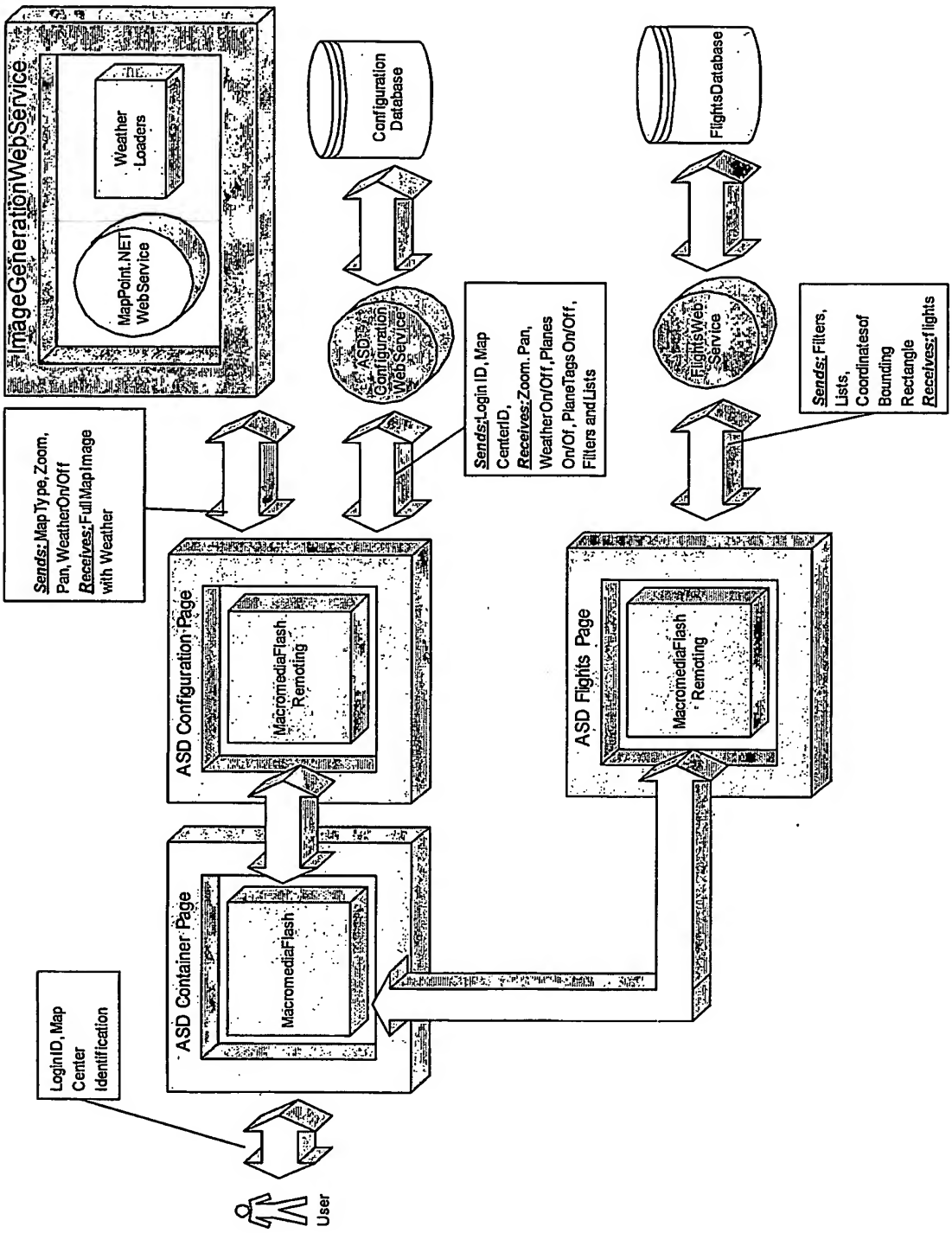

Usingtherule, collectsthe flightsforalert
NotificationDaemon
RuleQuery
DeviceInfo Query
Message Text Formatter
FlightsInfo
RecipientInfo
DeviceInformation
Collects specificdevice informationfor allinterested users
Formatsthe alerttextbased onthedevice type
Storesthe messagesthat aretobesent
Collectsthe usersthatare interestedin theflightsfor alert
Configuration Database
TravelDatabase
Flights,Weather, TrafficDatabases
Notification Queue
NotificationDelivery Daemon
Mail Provider Integration
SMS Provider Integration
DeliversThe Messagesfrom the Queue

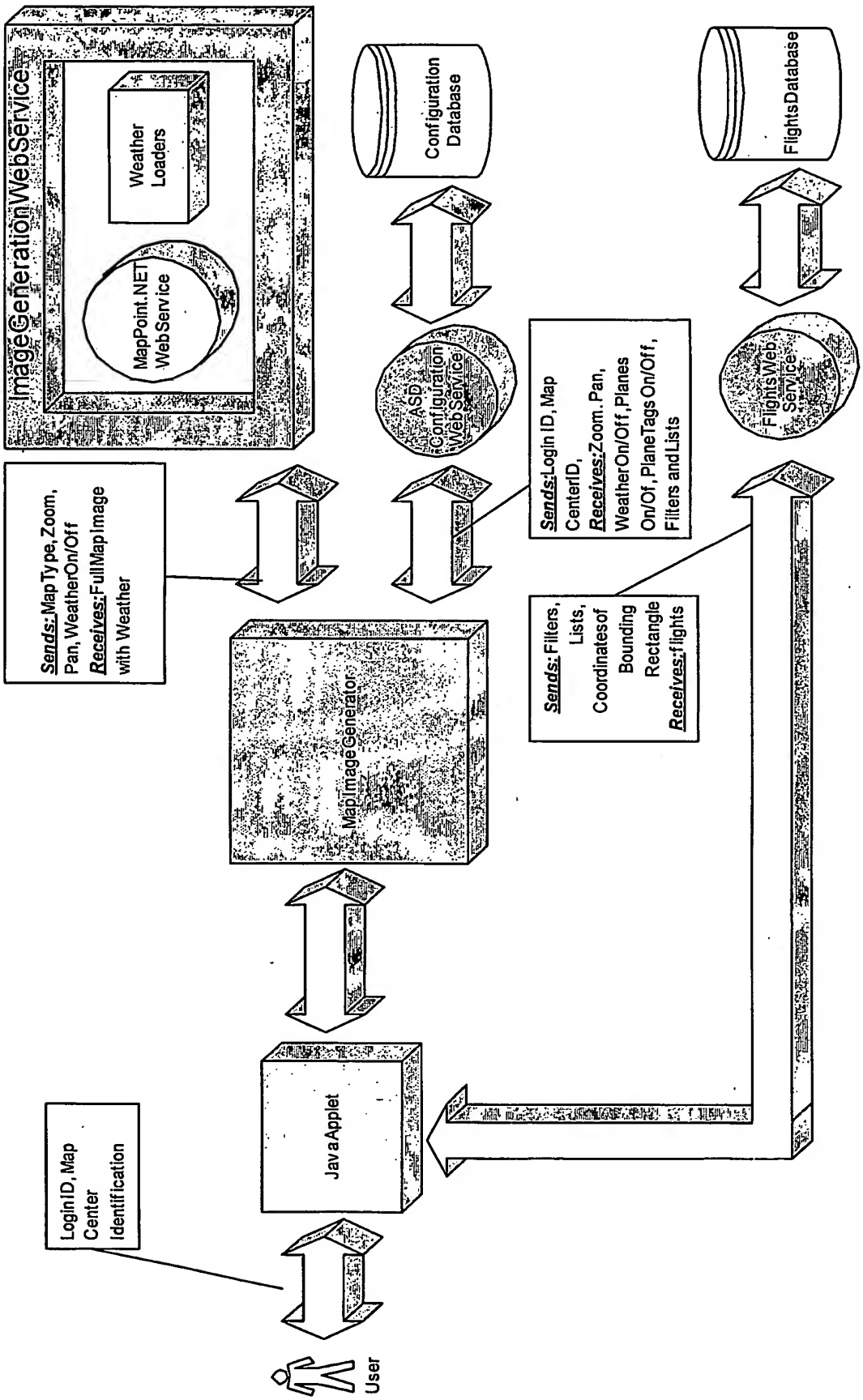

Daemon Starts
All Rules Processed?
Yes
Daemon Finished
Yes
No
Execute Rule Query
All Found Flights Processed?
No
Find Users that are to be notified about this alert
Update Flight to clear the Alert Condition
All Users Processed?
Yes
Yes
No
Find The Devices for the User to be notified on
All Devices Processed?
No
Compile a Message for the Alert and Device type
Store into queue:
- Message
- Device Info (address, phone number, etc.)

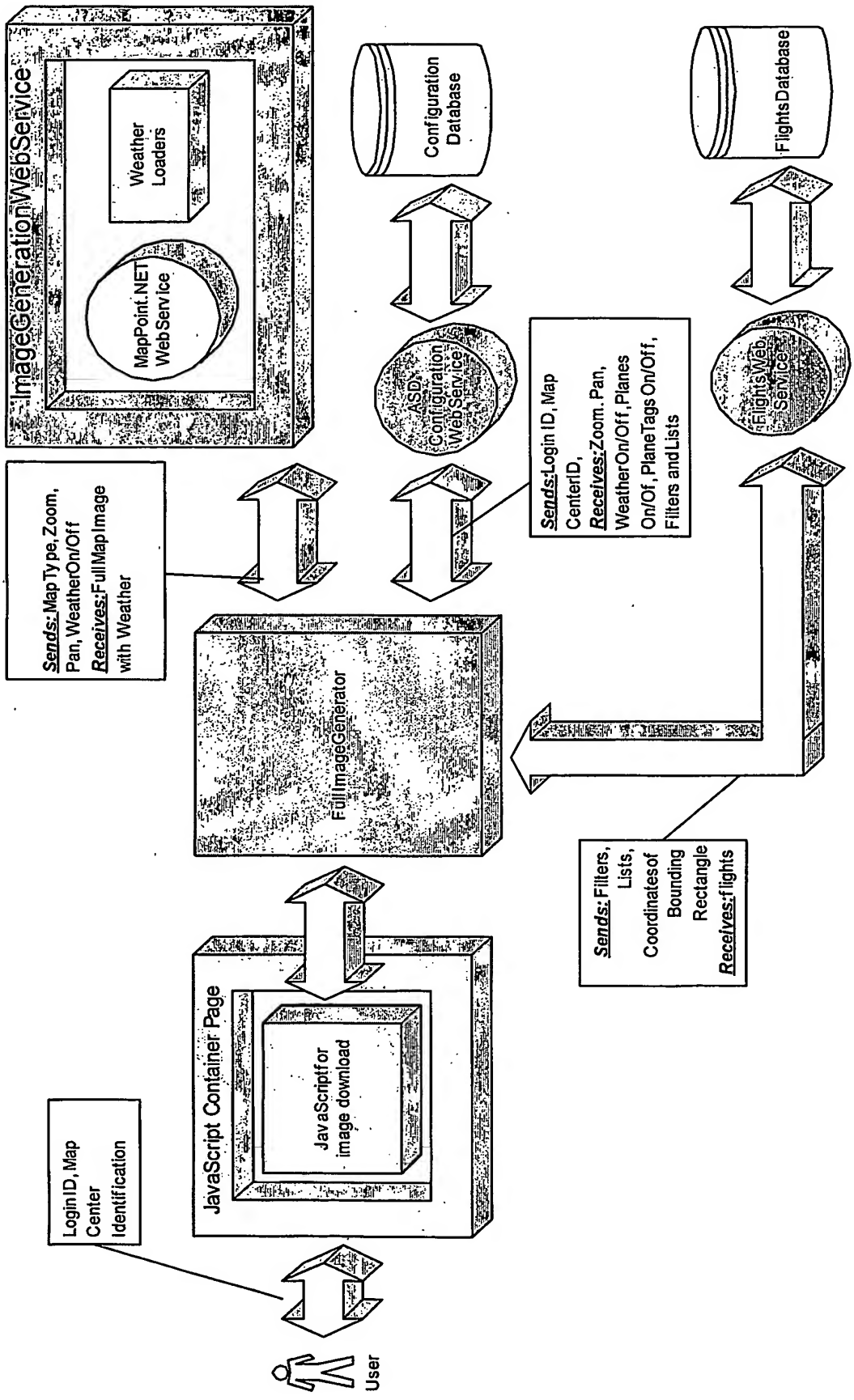

Delivers The Messages from the Queue
Notification Delivery Daemon
Mail Provider Integration
SMS Provider Integration
Notification Queue
Stores the messages that are to be sent
Collects device information for all users that are to receive broadcast
Broadcast Daemon
DeviceInfo Query
DeviceInformation
Configuration Database
Broadcast Query Reader
BroadcastInfo
Broadcast Queue
TSM
Travelers Report
Travelers Maps
Collects broadcast information:
- Message
-Recepients


Corporate Portal
TSM
Travelers Maps
Travelers Report
TIM
TIMFlights Information
Map Generator
Microsoft MapPoint Web Service
PNRReader
PNR
Travel Agency
Travel Data Base
Itineraries Processor
Itineraries
FAA
FAA Feed Processor (FTM)
Classll
Flights Databases
Supporting Data Loader (Airports, Airlines, Aircrafts)
Supp. Data
Schedule Loader
Schedule
Schedule Provider
Airports Delays Processor


Client
Layers Manager
Layer
«Web Service» Data Source
GetLatestImage()
Find All The Layers()
For each layer
IsLayer On()
GetBoundary Rectangle()
For Base Layer only
For each layer that is on
GetLayerImage(Boundary Rectangle)
IsImageExpired
GetLayerData
If the data is expired
LayerData
GenerateImage
Image
AddImage
Image
GetLayerImage
GenerateImage
AddImage
Display


ImageGenerationWebService
Weather Loaders
MapPoint.NET WebService
Configuration Database
FlightsDatabase
ASD Configuration WebService
FlightsWeb Service
Sends: Map Type, Zoom, Pan, WeatherOn/Off
Receives: Full Map Image with Weather
Sends: Login ID, Map CenterID,
Receives: Zoom. Pan, WeatherOn/Off, Planes On/Of, PlaneTags On/Off, Filters and Lists
Sends: Filters, Lists, Coordinates of Bounding Rectangle
Receives: flights
ASD Configuration Page
MacromediaFlash Remoting
ASD Flights Page
MacromediaFlash Remoting
ASD Container Page
MacromediaFlash
LoginID, Map Center Identification
User


ImageGenerationWebService
Weather Loaders
MapPoint.NET Web Service
Configuration Database
FlightsDatabase
ASD Configuration Web Service
Flights Web Service
Sends: Map Type, Zoom, Pan, WeatherOn/Off
Receives: FullMap Image with Weather
Sends: Login ID, Map CenterID,
Receives: Zoom. Pan, WeatherOn/Off, Planes On/Of, PlaneTags On/Off, Filters and Lists
Sends: Filters, Lists, Coordinates of Bounding Rectangle
Receives: flights
MapImageGenerator
JavaApplet
LoginID, Map Center Identification
User


ImageGenerationWebService
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Receives: flights
JavaScript Container Page
JavaScript for image download
Login ID, Map Center Identification
User